Information
Technology
Commission

Appendices
February 2003

A. CHARTER

COMMONWEALTH OF MASSACHUSETTS
Information Technology Commission
Charter

BACKGROUND

Citizens have come to expect that information technology (IT) play a pivotal role in the delivery of government services. This expectation has become increasingly true at the state level, with this year being the first that IT spending by the states has collectively surpassed that of the federal government. Massachusetts' recent e-government initiative – Mass.*Gov* – has been tremendously successful in bringing the interaction between citizens and government much closer together.

Still, the growing demands of the citizens, businesses, government agencies, and employees of the Commonwealth raise several challenges that cannot be addressed by any one part or parts of Massachusetts government alone. Issues of IT architecture, security, data management, connectivity, and functionality are ones with far-reaching implications that cut across Massachusetts government as a whole. To ensure that IT in the Commonwealth is an effective and efficient enabler of government services, satisfying the needs of its customers, Massachusetts requires a means to systematically identify and tackle some of its enterprise-wide issues and challenges.

On June 26th, 2002, Governor Swift signed into law Chapter 142 of the Acts of 2002 titled "An Act Providing for Certain Information Technology Improvements". Section 6 of that act established a special commission "to recommend an enterprise-wide strategy. . . for the commonwealth's information technology infrastructure, system development, and governance." (see Attachment). The result is the Massachusetts Information Technology Commission who will articulate and promote this enterprise-wide view of IT in the Commonwealth.

PURPOSE & GOAL STATEMENT

The IT Commission's purpose is to recommend an enterprise vision for the Commonwealth's information technology infrastructure, system development, and governance that includes all three branches of government and the constitutional offices.

The goal of this project is to develop, at a high level, a statewide vision, set of goals, and blueprint for the implementation and management of information technology in Massachusetts. The development of an IT strategic plan for the Commonwealth is *not* the aim of this project. However, the outputs of this project – best practices, key issues, challenges, options, recommendations, etc. – are likely to serve as inputs for future IT strategic planning in the Commonwealth.

OBJECTIVES

The objectives of this project are threefold: 1) to assess the current state of information technology governance and management practices in the Commonwealth, 2) to develop an *enterprise-wide* vision based on that assessment, and 3) to make recommendations for future action(s) that support the vision and an enterprise approach to IT.

The work of this project will culminate in Commission reports to the Legislature, specifically in the form of an executive summary by 15 January 2003 and a final report by 31 January 2003.

To support the Commission in the successful completion of its goals, the Information Technology Division (ITD) of the Executive Office of Administration and Finance (EOAF) has enlisted a team of specialists from IBM Business Consulting Services (IBM BCS). They will provide support to the commission in conducting the "As Is" Assessment, facilitating the "to-be" vision, and documenting findings and recommendations for IT in the Commonwealth.

COMMISSION MEMBERSHIP AND OTHER PARTICIPANTS

The members of the IT Commission have been appointed consistent with the legislative authorization as follows:

1	Co-Chair	Secretary EOAF or designee	Designee: Stephen Crosby, Chief of Staff, Office of the Governor
2	Co-Chair	Chair House Committee on Science & Technology	Representative Arthur Broadhurst
3	Co-Chair	Chair Senate Committee on Science & Technology	Senator David Magnani
4		Governor's Appointee	Steve Kolodney, Vice President, Public Sector, AMS
5		Governor's Appointee	David Segal, Senior Vice President for Customer Services and Operations, Harvard Pilgrim Health Care
6		Governor's Appointee	Jerry Mechling, Director of Executive Programs, Kennedy School of Government, Harvard University
7		Governor's Appointee	Dennis Govoni, Chief Technologist, Sun Microsystems
8		Governor's Appointee	Lynn Lyford, Senior Vice Presidents, EDS
9		Speaker's Appointee	Representative Stephen Buoniconti
10		Speaker's Appointee	Representative Mark Falzone
11		Speaker's Appointee	Representative Thomas Stanley
12		Speaker's Appointee	Donald Dubendorf, President of Berkshire Connect; Grinnell, Dubendorf, and Smith LLP
13		Speaker's Appointee	Bart Guerreri, Chairman and President, DSD Labs
14		Senate President Appointee	Senator Jo Ann Sprague
15		Senate President Appointee	Senator Stanley Rosenberg

16	Senate President Appointee	Senator Andrea Nuciforo, Jr
17	Senate President Appointee	David Jegen, Principal, Cisco Systems
18	Senate President Appointee	Donna Cupelo, Region President, Verizon, representing the Massachusetts Telecommunications Council
19	Chief Justice SJC (or designee)	Designee: Judge Timothy Hillman, Associate Justice, Superior Court
20	Chief Information Officer	Peter Quinn
21	Comptroller	Martin Benison
22	Director of Economic Development	Designee: Jack Troast, Director of Policy
23	Director, Massachusetts Technology Collaborative	Mitchell Adams
24	President UMass (or designee)	Designee: David Gray, Chief Information Officer, UMass
25	State Auditor (or designee)	Designee: John Beveridge, Deputy Auditor

The Information Technology Division (ITD) of the Executive Office for Administration and Finance is providing support for this project through the assignment of a Project Manager and the engagement of IBM Business Consulting Services. Participants supporting this project are listed below.

Information Technology Division:
- Claudia Boldman, Director of Policy and Planning and Project Manager
- Linda Hamel, General Counsel
- Peter Quinn, Chief Information Officer

IBM Business Consulting Services:
- Rick Webb; Engagement Manager and Governance Strategy Lead
- Mary Ellen Sylvester; Project Manager
- Emilie Schmidt; IT Strategy Lead
- Dan Garrison; Business Analyst
- Jon Hebhardt; Applications Specialist
- Neil Boater; Applications Specialist
- Alan Perkins; Data Center Specialist
- Henry Horton; Security Specialist
- Todd Stockslager; Network Specialist
- Subhash Sreenivasan; Web Developer
- James Collier; Senior Facilitator
- Jesse Richards; IT Project Management Specialist

ATTACHMENT: CHAPTER 142 OF THE ACTS OF 2002, SEC. 6

SECTION 6. Notwithstanding any general or special law to the contrary, there shall be a special commission to recommend an enterprise-wide strategy, including all 3 branches of government and the constitutional offices, for the commonwealth's information technology infrastructure, system development and governance. The report shall identify all of the commonwealth's management information systems, their general condition and the populations served and shall review the list of mission critical systems as defined by the state information technology division. The report shall examine all of the commonwealth's networks and data centers to determine if they satisfy the goal of operating in the most secure, redundant and cost-effective manner. Said commission shall identify methods that facilitate the availability of broadband and wireless network services. The commission shall recommend any changes necessary to meet the goals established by it, including recommendations to ensure that agencies work effectively with one another, that similar systems and processes are developed and shared across agencies and that new systems meet the needs of citizens, business and other governmental agencies.

The commission shall be co-chaired by the secretary of administration and finance or his designee and the chairmen of the house and senate committees on science and technology. The information technology division shall provide the necessary staff to the commission.

The governor, the speaker of the house of representatives, and the president of the senate shall each appoint 5 members to the commission, 2 of whom shall not be employed by the commonwealth. One appointee of the speaker and 1 appointee of the president shall be from the minority party. Other members of the commission shall include the commonwealth's chief information officer, the comptroller, the director of economic development, the director of the Massachusetts Technology Collaborative, the president of the University of Massachusetts or his designee, the state auditor or his designee and the chief justice of the supreme judicial court or her designee. The commission shall file a report with the house and senate clerks by December 15, 2002.

B. LIST OF INTERVIEWEES

Organization	Interviewees
Executive Branch	
Department of Revenue	Vincent Piccinni, CIO Scott Akers, Technical Lead
Human Resources Division	Patricia Wada, Personnel Administrator
Executive Office of Environmental Affairs	Victoria Phillips, SIO Matt Walls, WAN Management Christian Jacqz, GIS Manager
Division of Employment and Training	Jeff Ritter, CIO
Office of Consumer Affairs and Business Regulation	Tim Healy, CIO
Registry of Motor Vehicles	Larry McConnell, CIO
Department of Social Services	Mary Ellen Bennard, CIO
Department of Transitional Assistance	Jim Reen, CIO
Department of Public Health	Bill O'Callaghan, CIO Kim Young, Application Security Mark Thibault, Network
Operational Services Division	Marge MacEvitt
Department of Education	Maureen Chew, CIO
Executive Office of Public Safety	Jim Slater, SIO
Office of the State Comptroller	Martin Benison, Comptroller Diane Ledwell, Deputy Comptroller
Criminal History Systems Board	Curtis Wood, Deputy Director
Department of Economic Development	John Troast, Director of Policy
Executive Office for Admin. And Finance	Eric Kriss, Secretary
Office of the Governor	Stephen Crosby, Chief of Staff
Department of Environmental Protection	Deb Quinn, CIO Bill Harkins, CFO Arleen O'Donnell, Deputy Commissioner for Policy and Planning Andrew Gottlieb, Assistant Deputy Commissioner
Higher Education	
UMass	David Gray, CIO Hugh Friel, Deputy CIO Michael Chmura, Mgr, Technical Services
Constitutional Offices	
Office of the State Auditor	John Beveridge, Deputy Auditor
Independent Authorities	

Organization	Interviewees
MA Corp. for Educational Telecommunications	Ray Campbell, Executive Director
Judicial	
Superior Court (MassCourt Project)	Hon. Timothy Hillman, Associate Justice Hon. Herman Smith, Associate Justice
District Attorneys	
Massachusetts District Attorneys Ass'n	Ron Calabria, CIO
Legislature	
Massachusetts Senate	Sen. David Magnani Mary Ann Padien, Senate Staff
IT Commission Members (not listed above)	
AMS	Steve Kolodney, VP, Public Sector
Harvard Pilgrim Health Care	David Segal, Sr. VP, Customer Service & Operations
Kennedy School of Gov't., Harvard Univ.	Dr. Jerry Mechling, Director, Executive Programs
Sun Microsystems	Dennis Govoni, Chief Technologist
EDS	Lynn Lyford, Regional Director, Global Government Affairs
DSD Labs	Bart Guerreri, Chairman & President
Cisco Systems	David Jegen, Principal
Berkshire Connect; Grinnell, Dubendorf, and Smith LLP	Don Dubendorf, Esq.
Massachusetts Technology Collaborative	Mitchell Adams, Executive Director
Private Sector	
EDS	Terry Milholland, CIO Mary Ann Wangemann, EDS Fellow Bill Poulos, EDS Fellow, Vice President US Government Solutions Diane Horvath, Director, Legal & Legislative Svcs. Div., Department of Information Technology
Verizon	Gerald F. O'Neill, Regional Sales Manager, Enterprise Sales Group Paul G. Dimitruck, Sr. Technical Specialist, Enterprise Solutions Group James J. Doyle, General Manager of Branch Operations, Enterprise Sales Grp. Carolyn Jussaume, Corporate Account Manager, Enterprise Sales Group

Organization	Interviewees
Verizon (Continued)	Frank R. Nuttall, General Manager Global Sales, Enterprise Solutions Group
	Wes Adams, Corporate Account Manager, Enterprise Sales Group
	Joseph H. Zukowski, Vice President, Public Affairs
Cisco Systems	Michelle Grisham, Kevin Cody, Glen Belleveau, Kurt Conrad
DSD Labs	Michael A. Sicuranza, Vice President
	Dennis Paul, Director, Center for Reengineering and Enabling Technology
BACKBONE Security.com	Glenn Watt, CISSP, President
Massachusetts Technology Collaborative	Kevin J. Paulsen, Project Manager, MassConnect
	Peter J. Pratt, Project Manager, Telecommunications Initiative
Information Technology Division	
Commonwealth CIO	Peter Quinn, Director
Policy and Planning	Claudia Boldman, Director
General Counsel	Linda Hamel
Strategic Planning	Val Asbedian, Director
Operational Services	Ralph Ragucci, Director
	Lou Macinanti, Enterprise Infrastructure
	Frank Burns, Telecommunications
	Rich Glasberg, Network Engineering
Enterprise Security Management	Dan Walsh, Director
	Dick Bianco, Network Security
	Sue Comeau, Enterprise Security Policy
	Jim Wentzel, Network Security
Mass.*Gov*	Bob Nevins, Executive Director
Technology Finance	Lou Angeloni, CFO
	Harry Kreide, Chargeback
	Ed Shapiro
Recruiter	Ellen Wright
Enterprise Applications	Anna Dos Santos, Director
	Mark Heumann, Shared Services
HR/CMS	Darrel Harmer, Director
Commonwealth Information Warehouse	Rick Keyes, Director
Focus Groups	
CIO Council	Agency CIOs
ITD Agency Liaisons	Walter Brownell and Agency Liaisons

C. IT COMMISSION MEETING SCHEDULE

The IT Commission met six times between November 2002 and February 2003, as follows:

Date	*Agenda*
November 14, 2002	Kick-off Meeting
December 18, 2002	"As Is" Assessment/Visioning
January 9, 2003	Best Practices/Roundtable Discussion with Former Government CIOs
January 22, 2003	Preliminary Recommendations
February 4, 2003	Draft Final Recommendations
February 27, 2003	Approval of Final Report

The presentation materials and minutes from these meetings are available on the IT Commission web site: http://www.state.ma.us/itcommission.

D. DATA CENTER – DETAILED ANALYSIS

The observations and findings made related to the Data Center section of the main report were determined during interviews and document analysis. The assessment is the result of document review, interviews of key personnel, and self-assessment surveys completed by selected data center managers. Interview notes and survey materials are attached to this report.

DOCUMENTS REVIEWED:
- Strengthening IT Infrastructure Report 10/2001
- Justification for a Second Active Data Center 11/2000
- The Milford Plan 3/2000
- ITD Study: Second Active Data Center 4/1999

DATA CENTER SELF-ASSESSMENTS:
- Vincent Piccinni, DOR
- Jim Reen, DTA
- Victoria Phillips, EOEA
- Ralph Ragucci, ITD
- Hugh Friel, UMass

The following table is a summary of the data center management self-assessments provided by selected Commonwealth data center managers (individual surveys are attached). The survey instrument reflects data center management techniques and practices ranging from poor to world class. Respondents were asked to provide a single score for each range of practices that best reflects the current situation at their data center.

It should be noted that some of the responses appear to be inflated as they are in contrast with evidence provided to the team, with team observations, and with results of data center customer interviews.

COMPOSITE DATA CENTER MANAGEMENT SELF ASSESSMENT					
SCORE	(1) UNFOCUSED	(2) AWARE	(3) CAPABLE	(4) MATURE	(5) WORLD CLASS
4	No long-term of strategic planning.	Some planning for additional systems.	Long-term planning driven by logical design of systems and software.	Long-term planning driven by logical design, endorsed by management.	Long-term planning driven by logical design, endorsed by management, and implemented through standard processes.
3.4	No standard process for implementing applications	Application implementation process defined	Standard implementation process used for key applications.	Standard implementation process used for all applications	Application implementation processes evaluated and improved

COMPOSITE DATA CENTER MANAGEMENT SELF ASSESSMENT				
SCORE	(1) UNFOCUSED	(2) AWARE	(3) CAPABLE	(4) MATURE	(5) WORLD CLASS
3.2	No Systems Management functions defined or implemented.	Systems Management functions defined.	Problem and Change defined and implemented. Not adhered to enterprise-wide	Problem, Change, Capacity, Recovery defined, implemented and adhered to enterprise-wide.	All processes defined, documented, implemented and adhered to enterprise-wide.
2.6	No personnel skills inventory or training program		Key skills identified and training program exists for key skills and personnel.		Complete skills inventory and integrated training program exist
3.4	No consideration is given to placement of personnel with user population		Factors other than performance and efficiency used to determine location of individuals and departments		Individuals and departments that require close and constant contact with end users are close to their service population
4.6	No consideration is given to placement of IT management		Factors other than performance and efficiency used to determine location of IT Management		Individuals and departments that manage IT infrastructure are as close to that infrastructure as possible
2.8	Facility site selected to minimize natural hazards.		Facility site selected to avoid most severe hazards.		Facility site not subject to natural hazards.
3.4	Building envelope not hardened.		Building envelope provides minimal protection.		Building envelope designed for mission critical operations.
3.6	Building space not flexible or expandable.	Building space is flexible, not expandable.	Adequate headroom for raised floor. Space can be rearranged.		Building space planned for maximum flexibility and expandability.
4.2	Single points of failure existing the physical and logical design of the data center facility.	Single points of failure are identified.	Single points of failure are identified and mitigated.	Some single points of failure resolved. Others mitigated.	No single points of failure in the physical and logical design of the data center facility.
4.6	Single source of power and data communications feeds to facility.		Dual power, single data communications feeds to facility.		Dual power and data communications feeds.
4	Electrical distribution is not integrated.	Coordinated electrical distribution.		Load verification of electrical power.	Load management of electrical power.
3.8	No redundancy in MEP (Mechanical, Electrical, Power) systems.	Some redundancy.			All MEP designed with redundancy.

COMPOSITE DATA CENTER MANAGEMENT SELF ASSESSMENT					
SCORE	(1) UNFOCUSED	(2) AWARE	(3) CAPABLE	(4) MATURE	(5) WORLD CLASS
3.2	No environmental monitoring of facility MEP systems.	Some environmental monitoring, requires operator intervention and monitoring.	Automated environmental monitoring integrated with systems management software.	Automated environmental monitoring integrated with systems management software.	Automated environmental monitoring integrated with systems management software, focal pointed to single console, automated call out to maintenance personnel.
4.4	No preventive maintenance of facility MEP systems.	Some preventative maintenance, not regularly scheduled.	Some preventative maintenance, regularly scheduled, requires system downtime.	All preventative maintenance scheduled, requires limited system downtime.	Preventative maintenance, regularly scheduled, can be performed without system downtime.
3.2	No recovery planning.	Recovery planning defined, not implemented.	Recovery planning defined, implemented, not tested.	Recovery planning defined, implemented, tested.	Recovery planning defined by application and system, documented, tested and implemented. Hot site for backup exists.
4.8	No physical building security.		Physical security, unlimited access within building.		Security for building and by functional area within the building. Card Key system with automated alarms to central security. Building secured externally.
3.2	Never meets customer expectations	Seldom meets customer expectations	Meets customer expectations	Often exceeds customer expectations	Always exceeds customer expectations

The same data center managers were also asked to complete an assessment of the degree to which their data center complies with accepted IT/IS operating principles. In addition to being asked to indicate how they operate currently, they were asked to indicate how they believe they *should* be operating. Their responses are summarized below. The first number in a cell indicates the number of data center managers that assessed their current operations at that level and the second indicates the number of managers who believe they *should* be at that level. Note that the numbers of responses are not consistent because not all managers responded in all areas.

COMPOSITE IT/IS MANAGEMENT SELF ASSESSMENT						
'Project Managers' act principally as staff line managers	1	1	2	1 / 2	3	Project Managers spend their time almost exclusively committed to managing projects (i.e. they are freed from most staff management and admin responsibilities)
Project management methods and controls are generally informal/inconsistent		1	3	1 / 3	2	Project management methods and controls are formal and rigorously applied
Projects program, risk and issue management methods and controls are generally informal/inconsistent			3	1 / 2	2	Projects program, risk and issue management methods and controls are formal and rigorously applied
The controls applied to business requests for projects, enhancements and services are generally informal			1	4 / 1	4	Business demand management is a rigorous applied discipline within an agreed IT governance structure
Project requirements 'scope creep' control is generally informal		1	1	3 / 2	3	Project requirements 'scope creep' management is a rigorous applied discipline within an agreed IT governance structure
Systems development methods and controls are generally informal/inconsistent			1	3 / 1	3	Systems development methods and controls are formal and rigorously applied
The approach to systems configuration management is generally informal (principally focused on system components post-implementation)			3	2 / 1	4	The systems configuration management approach is formal and rigorously applied throughout the systems development and support life-cycle
There is little focus on establishing and maintaining a quality culture within IS			2 / 1	3	4	There is a major focus on establishing and maintaining a quality culture within IS
There is little focus on establishing and maintaining a customer service culture within IS				3 / 1	2 / 4	There is a major focus on establishing and maintaining a customer service culture within IS
IS has a hierarchic 'command and control' culture; decision making is largely centralized		1	2 / 2	2 / 1	2	IS has a 'trust and empowerment' culture; decision making is largely devolved
IT budgets within IS are largely centralized	1		3 / 1	1 / 3	1	IT budgets are largely devolved to IS group leaders and Project Managers
There is little focus on service level management; such service level agreements as exist are technically focused and generally not used actively to manage the 'price/service equation' with users	2 / 1	1	1	1 / 1	3	There is a major focus on service level management; service level agreements are 'end-to-end', expressed in business terms and used as a key tool in managing IS customer relationships
IS places little focus on marketing IT to the business.		1	1	3 / 1	4	There is a major focus on marketing IT to the business; IS is very proactive in identifying ways for IT to add business value
IS is perceived by the business as having a highly technical focus/culture	2		2 / 1	2	1	IS is perceived by the business as having a highly commercial focus/culture

COMPOSITE IT/IS MANAGEMENT SELF ASSESSMENT						
The IS function is predominantly insourced. There is a limited understanding of which IT roles/competencies are core to IS	1		1	2 3	1 2	Core IT competencies are insourced; non-core IT competencies are clearly recognized are predominantly outsourced
IS is (predominantly) a monopoly supplier of IT services to the business		1	2	1 2	1 1	IS is (predominantly) a manager/broker of IT services to the business
IT is managed and funded as technology reactor			1	3 1	1 4	IT is managed as technology leader
IS costs are carried as a corporate overhead	1 1	1	1	2 2	2	IS costs are transferred/billed to the end user on an actual resource usage basis and they directly impact user departmental budgets and user demand and service levels
IS is run and managed as a lowest cost IT provider			2	2 2	1 3	IS is run and managed as a value adding business partner
There is little focus on the potential of IT innovations			1 1	2 1	1 2	There is a major focus on IT innovation and how it might yield competitive advantage
IS is largely reactive to business work requests		2 1	1 1	2 2	1	IS drives business process transformation
IS is run as a cost centre	2 1	1	2	3	1	IS is run as a profit centre (and is effectively incentivized to maximize revenue)
The major focus in the financial management of IS is on IT cost containment/reduction	1	1	2 1	1 1	1	The major focus in the financial management of IS is on IT benefits management
After system implementation, there is generally little or no focus on measuring the success of the development (i.e. the actual realization of planned benefits)		2	1	1 3	1	After system implementation, there is a major focus on measuring whether the system is achieving its objectives and the actual delivery of net benefits predicted in the project's business case
IS staff are generally undervalued; 'lip service' is generally given to staff performance appraisal, training and career management		1	2	2 2	3	IS staff are demonstrably recognized and rewarded as key business assets; staff performance is rigorously managed against agreed objectives, with a major focus on training and career development
The remuneration of systems development staff is little related to their performance (in terms of productivity e.g. Function Points per man-week)	1		2	1 1	3	A significant part of systems development staff remuneration is related to their measured performance in terms of achieving productivity targets
The remuneration of Project Managers is little related to their performance (in terms of delivering quality projects to budget and schedule)	1		2	1 1	1 3	A significant part of the remuneration of Project Managers is related to their measured performance (in terms of delivering quality projects to budget and schedule)

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COMPOSITE IT/IS MANAGEMENT SELF ASSESSMENT						
The remuneration of Staff Managers is little related to their performance (in terms of recruiting/retaining staff and staff career development and satisfaction)	1	1	1	2 / 2	3	A significant part of the remuneration of Staff Managers is related to their measured performance (in terms of recruiting/retaining staff and staff career development and satisfaction)
The remuneration of Operations and Technical staff is little related to their performance	1	1	1	1 / 2	1 / 3	A significant part of the remuneration of Operations and Technical staff is related to their measured performance in terms of achieving service level targets agreed with the business
IS spend is principally 'supply constrained' (typically by annual negotiation of the IS budget)	3		2 / 1	2	2	IS spend is principally 'demand managed' (typically by negotiating 'contracts' for projects and services throughout the year)
IS is largely regarded by the business as an overhead function; its 'performance' is (in practice) generally assessed subjectively	3	1	2	2	2	IS is largely regarded by the business as a value-adding business partner; its 'business performance' is measured and reported back to senior business management (typically via a 'balanced scorecard') within an agreed IT governance structure

While individual data centers may differ individually, and some may excel in one or more management areas, the following table indicates a composite status of data center operations throughout the Commonwealth. This assessment reflects the opinion of the IBM Business Consulting Services team.

Independent Data Center Assessment:						
'Low/Low' Characteristics						**'High/High' Characteristics**
IT relatively isolated from business			x			Strong integration of IT and the business
Role of IT ill-defined		x				IT mission/objectives/CSFs well-defined
Business expected to 'take what it is given'		x				Demonstrable IT customer service culture
'It's just company money' culture in IT	x					Highly commercial culture in IT
'Command and control' culture	x					'Trust and empowerment' culture in IT
'Make do' culture	x					Demonstrable IT quality culture
High reactive IT function	x					Highly proactive IT function
Risk averse IT function		x				Innovative IT function
IT perceived as key business overhead		x				IT perceived as key business enabler
IT Manager with little Board influence	x					IT Director/CIO on main Board
Diverse IT mangers run 'fiefdoms'	x					Highly co-operative IT leadership team
Reward based on 'turf/empire' managed	x					Reward based largely on achieving work/project objectives and realizing benefits
Permanent staff/skills under-valued	x					Permanent staff demonstrably recognized as key assets
Highly constrained IT investment -'cost containment' culture	x					Flexible IT investment - 'benefits delivery' culture
IT investment largely supply constrained			x			IT investment principally driven by demand
Financial budgets owned by CIO; project mangers do not manage financial budgets for their projects	x					Financial budgets owned by project mangers who mange their projects within those budgets

Independent Data Center Assessment:							
'Low/Low' Characteristics						**'High/High' Characteristics**	
Informal approach to project management		x				Project management demonstrably recognized as key discipline	
Perception of slow/dubious delivery of business benefits from IT	x					Perception of fast/demonstrable delivery of business benefits	
IT plans focused on delivering low cost IT solutions that reduce business costs	x					IT plans focused on delivering IT solutions to gain competitive advantage	
Production system's reliability generally not critical to the business		x				Production systems' reliability generally critical to the business	
Little perceived need for behavioral change management disciplines in IT	x					Behavioral change management demonstrably recognized as key discipline in IT	
Informal/inconsistent approach to systems development	x					Rigorous but flexible approach to systems development	
Data not perceived as key corporate asset		x				Data demonstrably recognized as key corporate asset	